

In the Claims

1. – 24. (Cancelled)

25. (New) An antistatic film comprising:

a polyimide film with no conductive ultrafine particles and having a thickness of 7.5-125 μm ;
and

a metal oxide and conductive ultrafine particle mixed layer formed on a surface of the polyimide film, comprising a metal of the metal oxide and conductive ultrafine particles in a weight ratio (metal/conductive ultrafine particles) of 0.01-0.1, and having a thickness of 0.05-0.15 μm and a surface resistivity of no greater than $10^8 \Omega/\square$.

26. (New) The antistatic film according to claim 25, wherein the polyimide film is obtained from a tetracarboxylic acid component and a diamine component.

27. (New) The antistatic film according to claim 26, wherein the tetracarboxylic acid component is 3,3',4,4'-biphenyltetracarboxylic dianhydride.

28. (New) The antistatic film according to claim 25, wherein the metal oxide is an aluminum oxide.

29. (New) The antistatic film according to claim 25, wherein the conductive ultrafine particles have a mean particle size of no greater than 0.1 μm .

30. (New) The antistatic film according to claim 25, wherein the conductive ultrafine particles are ITO ultrafine particles.

31. (New) The antistatic film according to claim 25, wherein the mixed layer is formed by a coating method.

32. (New) A process for manufacture of an antistatic film according to claim 25, comprising:

coating the surface of a self-supporting film, obtained by casting and drying a solution of a film-forming heat-resistant resin precursor, with a mixture obtained by uniformly combining a metal compound which converts to a metal oxide upon heating, conductive ultrafine particles and a solvent,

heating the mixture to dryness,

removing the solvent, and

cyclizing the heat-resistant resin precursor.

33. (New) The process according to claim 32, wherein the metal compound which converts to a metal oxide upon heating is an organic aluminum compound.

34. (New) A process for manufacture of an antistatic film comprising:
coating a surface of a self-supporting film having no conductive ultrafine particles, obtained from a polyimide precursor solution, with a mixture comprising a metal compound which converts to a metal oxide upon heating, conductive ultrafine particles and a solvent;

drying the mixture to obtain a dry film with a metal compound and conductive ultrafine particle mixed layer, and

heating the dry film at a temperature of 420°C or above to complete imide cyclization to thereby form on the film surface a metal oxide and conductive ultrafine particle mixed layer having a surface resistance value of no greater than $10^8 \Omega/\square$ and the film is a polyimide film having a thickness of 7.5-125 μm , and the metal oxide and conductive ultrafine particle mixed layer comprises a metal of the metal oxide and conductive ultrafine particles in a weight ratio (metal/conductive ultrafine particles) of 0.01-0.1, and the metal oxide and conductive ultrafine particle mixed layer has a thickness of 0.05-0.15 μm .

35. (New) An antistatic film comprising a metal oxide and conductive ultrafine particle mixed layer formed on the surface of a film having no ultrafine conductive particles, wherein the conductive ultrafine particles are firmly held in the mixed layer by the metal oxide, thereby allowing the surface resistance value of the mixed layer to be kept within less than 10-fold compared to the initial value, even if a release effect is conferred by an adhesive tape at a pull rate of 60 m/min and wherein the film is a polyimide film having a thickness of 7.5-125 μm , and the metal oxide and conductive ultrafine particle mixed layer comprises a metal of the metal oxide and conductive ultrafine particles in a weight ratio (metal/conductive ultrafine particles) of 0.01-0.1, and the metal oxide and conductive ultrafine particle mixed layer has a thickness of 0.05-0.15 μm .

36. (New) The antistatic film according to claim 35, wherein the polyimide film is obtained from a tetracarboxylic acid component and a diamine component.

37. (New) The antistatic film according to claim 35, wherein the tetracarboxylic acid component is 3,3',4,4'-biphenyltetracarboxylic dianhydride.

38. (New) The antistatic film according to claim 35, wherein the metal oxide is an aluminum oxide.

39. (New) The antistatic film according to claim 35, wherein the conductive ultrafine particles have a mean particle size of no greater than 0.1 μm .

40. (New) The antistatic film according to claim 35, wherein the conductive ultrafine particles are ITO ultrafine particles.

41. (New) The antistatic film according to claim 35, wherein the mixed layer is formed by a coating method.